

Claims

1. A fluid delivery device (101) comprising:
 - a reservoir (111) adapted to contain a fluid and comprising, in a situation of use,
- 5 associated outlet means (113),
 - expelling means (112) for expelling a fluid out of the reservoir through the outlet means,
 - a voltage source (141),
 - a pair of electrodes (151, 152) adapted to be mounted in conductive contact with the
- 10 skin of a subject,
 - control means (121) adapted for identifying a predefined condition and applying a voltage between the pair of electrodes in response thereto, the flow of current between the pair of electrodes, in a situation of use, resulting in muscle stimulation.
- 15 2. A fluid delivery device as defined in claim 1, wherein the predefined condition belongs to the group of conditions comprising:
 - an actual fluid delivery rate which differs from a preset fluid delivery rate,
 - a pressure in the reservoir, expelling means or associated outlet means above a preset level,
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 - an amount of fluid in the reservoir below a preset level,
 - a flow of current between the pair of electrodes outside a preset range,
 - a low voltage condition for the voltage source, and
 - a preset timer interval.
- 25 3. A fluid delivery device as defined in claim 1 or 2, wherein the control means is adapted to receive remotely generated commands and to control the fluid delivery device in accordance therewith, the predefined condition belonging to the group of conditions comprising:
 - receiving a command from a predefined groups of commands,
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 - receiving a predefined command, and
 - performing a predefined control action in response to a received command.
4. A fluid delivery device as defined in claim 1, further comprising a mounting surface (405) adapted for application to the skin of a subject, the pair of electrodes (410) being ar-
- 35 ranged on the mounting surface.

5. A fluid delivery device as defined in claim 4, wherein the mounting surface comprises adhesive means which allows the device to be affixed to the skin of the subject user.
- 5 6. A fluid delivery device as defined in any of the previous claims, wherein the outlet means comprises a hollow infusion needle (113, 420) communicating, in a situation of use, with the interior of the reservoir.
- 10 7. A fluid delivery device as defined in claim 5, wherein the infusion needle comprises a distal pointed end (61) adapted to penetrate the skin of the subject, the infusion needle being moveable between a first position in which the pointed end of the needle is arranged in a retracted position relative to the mounting surface, and a second position in which the pointed end of the needle projects from the mounting surface.
- 15 8. A sensor device (301) comprising:
- a sensor means (313) adapted to be inserted transcutaneously through the skin of a subject and capable of being influenced by a body substance and producing a signal corresponding thereto,
 - control means (321) adapted to receive signals from the sensor means and generate command signals in response thereto,
 - a voltage source (341),
 - a pair of electrodes (351, 352) adapted to be mounted in conductive contact with the skin of a subject,
 - wherein the control means is adapted for identifying a predefined condition on the basis of the command signals and applying a voltage between the pair of electrodes in response thereto, the flow of current between the pair of electrodes, in a situation of use, resulting in muscle stimulation.
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9. A sensor device as defined in claim 8, wherein the command signals are in the form of a value indicative of a blood glucose level of the subject, and wherein the predefined condition belongs to the group of conditions comprising:
- a blood glucose level which is outside a given range,
 - a signal from the sensor means is outside a given range,
 - a low voltage condition for the voltage source, and
 - 35 - a preset timer interval.

10. A sensor device as defined in claim 8, further comprising a mounting surface adapted for application to the skin of a subject, the pair of electrodes being arranged on the mounting surface, the mounting surface preferably comprising a pressure-sensitive adhesive
5 which allows the device to be affixed to the skin of the subject user.

11. A signal device comprising:
- a first electrode adapted to be mounted in conductive contact with the skin of a subject,
10 - a second electrode adapted to be mounted in conductive contact with the skin of a subject, the first and second electrodes providing a pair of electrodes,
- a voltage source for providing a voltage between the pair of electrodes,
- control means for controlling the voltage applied between the pair of electrodes, the control means being adapted for identifying a predefined condition or a signal and apply a
15 voltage between the pair of electrodes in response thereto.

12. A signal device as defined in claim 11, further comprising a mounting surface adapted for application to the skin of a subject, the pair of electrodes being arranged on the mounting surface, the mounting surface preferably comprising adhesive means which allows
20 the device to be affixed to the skin of the subject user.

13. A signal device as defined in claim 11, wherein the control means is adapted to receive remotely generated commands and to apply a voltage between the pair of electrodes in response thereto.